

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

REC'D 20 OCT 2004

IPC PCT



Applicant's or agent's file reference P58851V-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/04180	International filing date (day/month/year) 26.09.2003	Priority date (day/month/year) 05.10.2002
International Patent Classification (IPC) or both national classification and IPC A45B19/00		
Applicant FREESTONE, Hugh Stephen		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 05.05.2004	Date of completion of this report 19.10.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Lang, D Telephone No. +49 89 2399-2092 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/04180**

1. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

2-8 as originally filed
1, 1a received on 22.09.2004 with letter of 20.09.2004

Claims, Numbers

1-26 received on 22.09.2004 with letter of 20.09.2004

Drawings, Sheets

1/9-9/9 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-26
	No: Claims	
Inventive step (IS)	Yes: Claims	1-26
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-26
	No: Claims	

2. Citations and explanations

see separate sheet

ITEM V:

Concerning independent claim 1:

There is no document cited in the search report disclosing all the features of claim 1, as no document discloses the characterizing portion of claim 1.

The subject-matter of claim 1 is thus novel (Article 33(2) PCT).

All the features of the preamble of claim 1 are known from FR-A-948421.

With the features of the characterizing portion the frame can be realised in one single moulded piece.

The subject-matter of claim 1 is considered as involving an inventive step (Article 33(3) PCT).

The industrial applicability of the subject-matter of claim 1 is obvious (Article 33(4) PCT).

Concerning the dependent claims 2 to 26:

Claims 2 to 26 are dependent claims and contain modifications of the inventive idea embodied in claim 1, and therefore also meet the requirements of article 33(2), (3) and (4) PCT.

Further comments:

The embodiments of figures 1 to 3 do not fall under the wording of claim 1 and should be deleted with the corresponding description.

DEVICES FOR PROTECTION AGAINST ADVERSE WEATHER CONDITIONS

This invention relates to devices for protection against adverse weather conditions including foldable umbrellas and devices of similar configuration such as parasols or sun shades.

Umbrellas and parasols are well known and typically take the form of a foldable framework which, when erected, has stretched over it a sheet of material which provides a protective cover against rain, sun or other undesirable weather. In the case of umbrellas the material is normally water resistant. The frame of these known devices comprises a handle portion which, when the device is erect, extends from the centre of the stretched material, the stretched material forming a typically domed surface at the top of the handle portion when the device is in use. A number of support arms extend from the handle portion beneath the stretched material when the device is in use so as to support the domed surface.

For maximum protection from adverse weather conditions such as heavy rain, snow, or strong sunlight, a user would desirably position himself at the centre of the protective domed surface of these known devices, this however is difficult when the only means for holding the device extends from the centre of the domed surface.

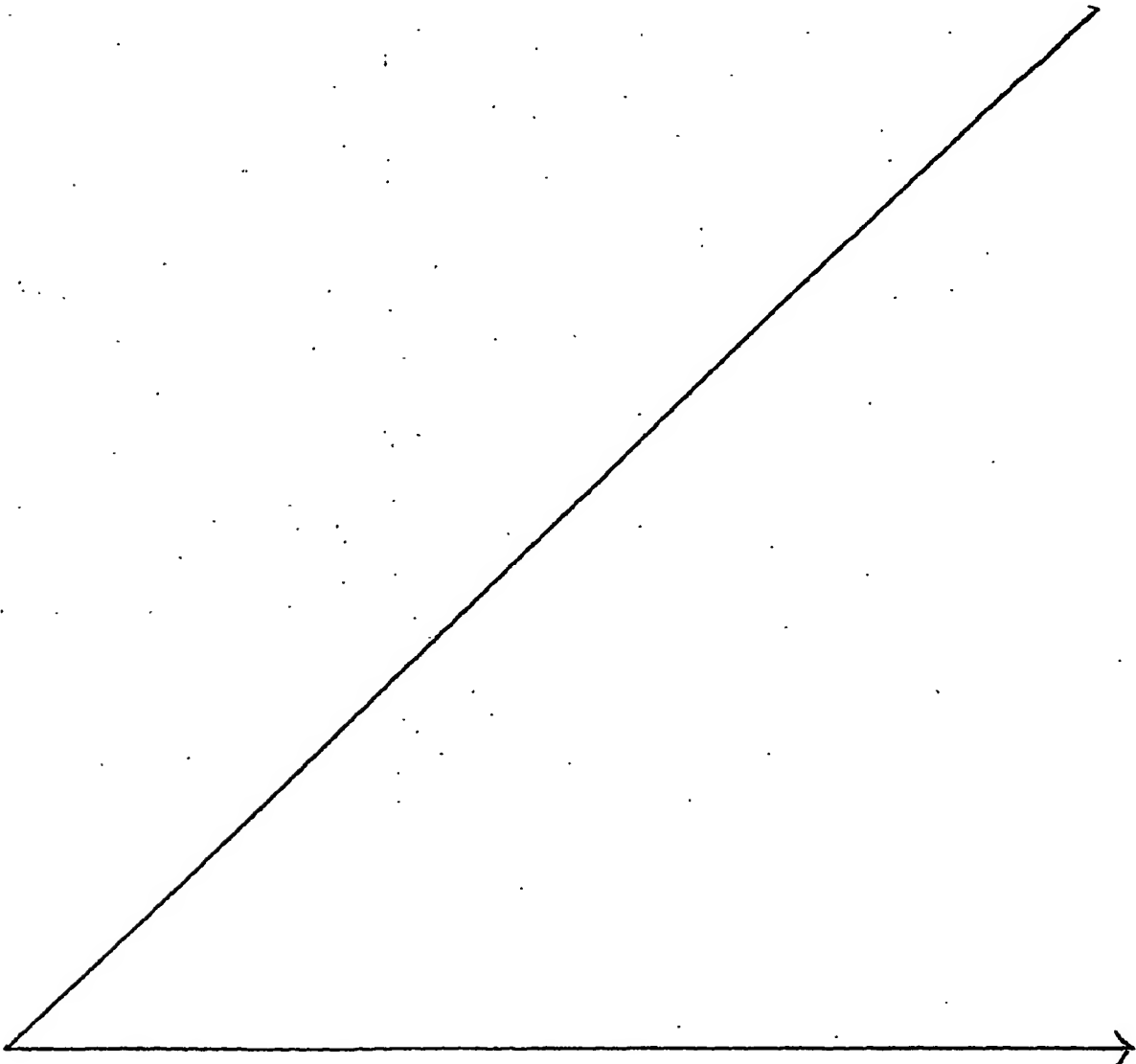
FR-A-848421 discloses an umbrella with an off-set handle fixed to a point of the external periphery and also connected to a vertical axis around which the umbrella is arranged. FR-A-948421 discloses foldable stiffeners that are connected to each other and to a cover by a central rosette. The large number of moulded components required would complicate the manufacture of this arrangement.

The present invention provides a device for protection against adverse weather conditions comprising; a framework foldable between a storable

1a

configuration and an erect configuration and a sheet of weather resistant material mounted on the frame, the sheet of weather resistant material forming, when the frame is in its erect configuration, a protective cover which can be positioned over a user to protect against adverse weather conditions, wherein, when erect, the frame is supported by a handle which extends from a position which is spaced apart from the centre of the erected frame.

Desirably, the handle extends from a position at or adjacent to an



CLAIMS

1. A device for protection against adverse weather conditions comprising; a framework comprising a main support strut (41) and a plurality of additional support struts (S1, S2, S3...) wherein the additional support struts (S1, S2, S3...) can be fanned out from a storable configuration where they are substantially in alignment with one another to an erect configuration where each additional strut (S1, S2, S3...) extends radially at a different rotational position to encircle a centre point about which all the struts (S1, S2, S3...) are pivotable, a sheet of weather resistant material (16) mounted on the frame, the sheet of weather resistant material (16) forming, when the frame is in its erect configuration, a protective cover which can be positioned over a user to protect against adverse weather conditions, wherein, when erect, the frame is supported by a handle (42) which extends from a support strut (41) at a position which is spaced apart from the centre of the erected frame, characterised in that the main support strut (41) and the plurality of additional support struts (S1, S2, S3...) are connected by a series of flexible links in the form of live hinges.
2. A device as claimed in claim 1 wherein the handle (42) extends from a position which is at or adjacent to an outer edge of the protective cover.
3. A device as claimed in claim 1 or 2 wherein the circle formed by the live hinges when the frame is erect is capped.
4. A device as claimed in claim 3 wherein the domed cap (82) includes a plug (81) receivable in a socket (71) provided within the circle formed by the live hinges.

5. A device as claimed in claim 4 wherein the frame and cap (82) comprise the same material.
6. A device as claimed in any preceding claim wherein the frame comprises a plastics material.
7. A device as claimed in any preceding claim wherein the plastics material is selected from polyvinyl chloride (PVC) or a polyethylene (PE), or a polypropylene (PP).
8. A device as claimed in any of claims 2 to 7 wherein the handle (42) is itself hinged and/or is hingedly connected to a strut.
9. A device as claimed in any of claims 2 to 8 wherein the handle (42) is connected to the main support strut (41).
10. A device as claimed in any preceding claim wherein the handle (42) is at least in part, telescopically extendable and retractable.
11. A device as claimed in any of claims 2 to 10 wherein the additional support struts (S1, S2, S3...) fan out in a substantially horizontal plane.
12. A device as claimed in any of claims 2 to 11 wherein the additional support struts (S1, S2, S3...) are arranged to fan out at an angle to the horizontal so as to provide a substantially dome or cone shaped surface over which the sheet of weather resistant material (16) is stretched.
13. A device as claimed in any preceding claim wherein the sheet of weather resistant material (16) includes a flap at either or both of its ends which meet when the device is fanned out to its fully erect configuration.

14. A device as claimed in claim 13 wherein the flap or flaps are fixable onto the opposite end of the sheet so as to provide a leak proof join between the ends of the sheet when the device is in its fully erect configuration.
15. A device as claimed in claim 13 or claim 14 wherein the flaps are fixable by means selected from press studs, hook and eye or Velcro™.
16. A device as claimed in any preceding claim wherein the sheet of weather resistant material (16) is water resistant.
17. A device as claimed in any preceding claim wherein the sheet of weather resistant material (16) is substantially opaque.
18. A device as claimed in any preceding claim wherein the sheet of weather resistant material (16) mounted on the frame comprises a continuous sheet.
19. A device as claimed in any preceding claim wherein the framework is provided with one or more locking mechanisms for locking the erected framework into position.
20. A device as claimed in claim 19 wherein the one or more locking mechanisms comprises a catch (63) configured for securing the main support strut (41) to an additional support strut (S1, S2, S3...) when the support struts (S1, S2, S3...) have been fanned out.
21. A device as claimed in any preceding claim wherein the framework is provided with one or more locking mechanisms for locking the handle portion in its desired position for holding the device.
22. A device as claimed in any preceding claim wherein the device includes

one or more locking mechanisms for locking the device in its storable configuration for ease of storage and transportation.

23. A device as claimed in any preceding claim wherein the handle (42) is detachably connected to the frame.
24. A device as claimed in claim 23 wherein the handle (42) is provided at one end with a collet (62) which is receivable in a collar (43) provided on the frame and is resiliently biased, when inserted into the collar (43), to grip the collar (43) from the inside.
25. A device as claimed in claim 24 wherein the collet (62) has a ridged or flanged end which, when the handle (42) is pulled so as to remove the collet (62) from the collar without first radially contracting the collet (62), tends to resist removal of the handle (42).
26. A device as claimed in any preceding claim wherein the additional struts (S1, S2, S3...) include a terminal strut (S8) which meets with the main strut (41), the main (41) and terminal (S8) struts being provided respectively with an upper (41a) and a lower surface (S8a) shaped to engage with the opposed surface of the other strut, each of these struts having a protrusion (41b, S8b) extending from the end of the strut furthest removed from the common axis the protrusions each being provided with a ribbed surface (41c, S8c) and being configured to provide a convenient gripping means which may be used by a user erecting the frame to draw the main and terminal struts together with a one handed grip.